

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

To:

see form PCT/ISA/220

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY
(PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/NO2004/000384

International filing date (day/month/year)
13.12.2004

Priority date (day/month/year)
15.12.2003

International Patent Classification (IPC) or both national classification and IPC
F15B11/042, F16L55/136, F16L55/132

Applicant
PLUGGING SPECIALISTS INTERNATIONAL ASA

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☒ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

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**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**International application No.
PCT/NO2004/000384

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
- a. type of material:
- ☐ a sequence listing
- ☐ table(s) related to the sequence listing
- b. format of material:
- ☐ in written format
- ☐ in computer readable form
- c. time of filing/furnishing:
- ☐ contained in the international application as filed.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/NO2004/000384

Box No. V Reasoned statement under Rule 43b/s.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	3,5-12,14-16
	No: Claims	1,2,4,13
Inventive step (IS)	Yes: Claims	
	No: Claims	1-16
Industrial applicability (IA)	Yes: Claims	1-16
	No: Claims	

2. Citations and explanations

see separate sheet

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

see separate sheet

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING
AUTHORITY (SEPARATE SHEET)**

International application No.

PCT/NO2004/000384

Re Item V**Reasoned statement with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement**

1 Reference is made to the following documents:

- D1: US-A-4 854 384 (CAMPBELL ET AL) 8 August 1989 (1989-08-08)
D2: DE 196 31 804 A1 (MANNESMANN REXROTH GMBH, 97816 LOHR, DE) 15
January 1998 (1998-01-15)
D3: WO 03/067134 A (CARSPHAIRN LIMITED; EARLY, CIARAN; GAGE, ERIC;
MCTAVISH, DOUGLAS; EARL) 14 August 2003 (2003-08-14)

2 Novelty

The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claims 1, 2, 4 and 13 is not new in the sense of Article 33(2) PCT.

2.1 With respect to independent apparatus claim 1

The document D1 discloses (the references in parentheses applying to this document, see the text passages cited in the search report and especially fig. 8):

Control system for a hydraulic cylinder comprising a cylinder chamber (), a piston head (72) and a piston rod (76), which control system () comprises a fluid line () between at least one side of the hydraulic cylinder's piston head (72) and a source of hydraulic fluid, which fluid line () comprises at least in a part two parallel lines () in which [in] one of the lines () there is arranged a pump (36), wherein the other parallel line () comprises a control element (190), which allows less fluid through the line () in the opposite direction of the pump (36), than the pump in the other line () when the pump is running.

The features of this claim are also disclosed in D2.

2.2 With respect to claims 2 and 4

Claim 2 contains all features of claim 1 and some additional features relating to a plug. Claim 2 was therefore regarded as a claim dependent on claim 1. The features of claims 2 and 4 are also known from D1 (see especially figs. 2 and 8).

2.3 Independent method claim 13

The document D1 discloses (the references in parentheses applying to this document, see the text passages cited in the search report and especially col. 1, line 8-29, col. 9, line 4-55 and figs. 2, 3, 8):

Method for setting a plug (12) in a pipe (), which plug (12) comprising anchoring (26, 180) and sealing (24) devices operated by at least one hydraulic cylinder (70) with a control system () comprising fluid lines () from at least one side of the hydraulic cylinder's piston head (72) to the other side of said piston head (72) and/or an accumulation tank and in the fluid lines () a pump (36) with a motor (32), and in parallel with the pump (36) a valve (190) with,

- inserting the plug (12) in the pipe ()
- moving it to the required position in the pipe ()
- activating a setting procedure by starting said pump (36) and building up a necessary setting pressure in the hydraulic cylinder (70),
- relieving the pressure on one side of said plug (12) until a sufficient differential pressure is established across the plug (12).

3 Inventive Step

3.1 Claims 3, 5-12

Dependent claims 3, 5-12 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of inventive step, the reasons being as follows:

The features of claims 6-8 and 12 are as such known from D1 (see the text passages cited in the search report).

Claims 3, 5 and 9-11 relate to the type of control element, the preloading means and a reversible pump. These features are as such all well-known in the art (for claims 9 and 10 see the text passages of D3 cited in the search report) and they are employed by persons skilled in the art in accordance with circumstances without the exercise of inventive skill.

3.2 Claim 14

Claim 14 was regarded as being dependent on claim 13 instead of claim 12 because claim 12 does not relate to a method. In the light of D1 the features of this claim are obvious to the person skilled in art.

3.3 Independent claims 15 and 16

Claim 16 was considered as an independent claim. The subject-matter of the claims 15 and 16 does not involve an inventive step as it comes within customary practice of persons skilled in the art, especially in the light of D1 together with D3 (see the text passages cited in the search report).

Re Item VII

Certain defects in the international application

Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the documents D1 and D3 is not mentioned in the description, nor are these documents identified therein.